

PATENT CLAIMS

1. Non-toxic anti-freezing and anti-corrosion water solution comprising polyvalent alcohol such as glycerol from 38% to 88%, water and additives as inhibitors which is effective at temperatures from -65°C to +110°C.

2. Non-toxic anti-freezing and anti-corrosion water solution according to claim 1, for temperatures up to -25°C, which is comprised of water solution of additives plus glycerol, where water solution of additives comprises 97.40% of distilled water, 0.60% of triethanolamine, 0.60% of polycarboxylate, 0.50% of benzotriazole, 0.20% of sodium tetraborate, 0.20% of sodium nitrate, 0.15% of sodium nitrite, 0.10% of sodium sulphide, 0.13% of potassium sulphide, 0.10% of Sodium chromate, 0.10% of Sodium benzoate, 0.03% of Sodium hydroxide, 0.20% of Sodium metaborate, 0.20% of calcium cyanamide, 0.005% of silicate oil, and where glycerol makes 38% of final non-toxic anti-freezing and anti-corrosion water solution.

3. Non-toxic anti-freezing and anti-corrosion water solution according to claim 1, for temperatures up to -35°C, which is comprised of water solution of additives plus glycerol, where water solution of additives comprises 92.0% of distilled water, 1.00% of triethanolamine, 1.00% of polycarboxylate, 1.50% of benzotriazole, 0.40% of sodium tetraborate, 0.30% of sodium nitrate, 0.25% of sodium nitrite, 0.25% of sodium sulphide, 0.90% of potassium sulphide, 0.20% of Sodium chromate, 0.20% of Sodium benzoate, 0.05% of Sodium hydroxide, 0.30% of Sodium metaborate, 0.35% of calcium cyanamide, 0.005% of silicate oil, and where glycerol makes 48% of final non-toxic anti-freezing and anti-corrosion water solution.

4. Non-toxic anti-freezing and anti-corrosion water solution according to claim 1, for temperatures up to -55°C, which is comprised of water solution of additives plus glycerol, where water solution of additives comprises 82.0% of distilled water, 3.10% of triethanolamine, 2.60% of polycarboxylate, 3.20% of benzotriazole, 0.60% of sodium tetraborate, 0.40% of sodium nitrate, 0.35% of sodium nitrite, 1.10% of sodium sulphide, 2.20% of potassium sulphide, 0.65% of Sodium chromate, 0.35% of Sodium benzoate, 0.08% of Sodium hydroxide, 0.40% of Sodium metaborate, 0.45% of calcium cyanamide, 0.005% of

silicate oil, and where glycerol makes 60% of final non-toxic anti-freezing and anti-corrosion water solution.

5. Non-toxic anti-freezing and anti-corrosion water solution according to claim 1, for temperatures up to -65°C , which is comprised of water solution of additives plus glycerol, where water solution of additives comprises 78.00% of distilled water, 3.60% of triethanolamine, 3.40% of polycarboxylate, 4.80% of benzotriazole, 0.80% of sodium tetraborate, 0.45% of sodium nitrate, 0.45% of sodium nitrite, 1.40% of sodium sulphide, 2.90% of potassium sulphide, 1.00% of Sodium chromate, 0.45% of Sodium benzoate, 0.10% of Sodium hydroxide, 0.80% of Sodium metaborate, 0.90% of calcium cyanamide, 0.005% of silicate oil, and where glycerol makes 88% of final non-toxic anti-freezing and anti-corrosion water solution.

6. Regenerator for wasted antifreeze which comprises polyvalent alcohol such as glycerol, water and additives as inhibitors.

7. Regenerator for wasted antifreeze, which comprises 82.95% of glycerol, 10.00% of distilled water, 1.00% of polimark polycarboxylate, 1.00% of benzotriazole, 0.80% of triethanolamine, 0.20% of sodium metasilicate, 0.30% of potassium dichromate, 0.30% of sodium tetraborate (borax), 0.35% of sodium nitrate, 0.20% of sodium nitrite, 0.30% of sodium sulphide, 0.25% of potassium sulphide, 0.20% of sodium tripolyphosphate, 0.20% of sodium chromate, 0.30% of sodium benzoate, 0.03% of sodium hydroxide, 0.30% of benzosulphamide, 0.45% of calcium cyanamide and 0.005% of silicate (silicate oil).

8. Regenerator for wasted antifreeze, which comprises 75.65% of glycerol, 10.00% of distilled water, 1.30% of polimark polycarboxylate, 2.20% of benzotriazole, 1.10% of triethanolamine, 0.40% of sodium metasilicate, 0.70% of potassium dichromate, 0.45% of sodium tetraborate (borax), 0.40% of sodium nitrate, 0.45% of sodium nitrite, 0.90% of sodium sulphide, 0.40% of potassium sulphide, 0.60% of sodium tripolyphosphate, 0.45% of sodium chromate, 0.85% of sodium benzoate, 0.05% of sodium hydroxide, 0.45% of benzosulphamide, 1.10% of calcium cyanamide and 0.005% of silicate (silicate oil).

9. Regenerator for wasted antifreeze, which comprises 63.55% of glycerol, 10.00% of distilled water, 1.60% of polimark polycarboxylate, 4.20% of benzotriazole, 1.60% of triethanolamine, 0.90% of sodium metasilicate, 1.10% of potassium dichromate, 0.90% of sodium tetraborate (borax), 0.70% of sodium nitrate, 0.60% of sodium nitrite, 2.20% of sodium sulphide, 1.20% of potassium sulphide, 0.75% of sodium tripolyphosphate, 1.20% of sodium chromate, 1.20% of sodium benzoate, 0.08% of sodium hydroxide, 1.00% of benzosulphamide, 1.20% of calcium cyanamide and 0.005% of silicate (silicate oil).